

Supporting Statement

30 C.F.R. § 57.5047, Gamma Radiation Exposure Records (pertains to metal and nonmetal underground mines)

A. Justification

1. Explain the circumstances that make the collection of information necessary. Identify any legal or administrative requirements that necessitate the collection. Attach a copy of the appropriate section of each statute and regulation mandating or authorizing the collection of information.

Under Section 103(c) of the Federal Mine Safety and Health Act of 1977, MSHA is required to ". . . issue regulations requiring operators to maintain accurate records of employee exposures to potentially toxic materials or harmful physical agents which are required to be monitored or measured under any applicable mandatory health or safety standard promulgated under this Act."

Medical doctors and scientists have associated gamma radiation exposures with lung cancer and other debilitating occupational diseases. Gamma radiation occurs anywhere that radioactive materials are present. Natural sources include rocks, soils, and ground water. Gamma radiation hazards may be found near radiation sources at surface operations using X-ray machines, weightometers, nuclear and diffraction units. Nuclear gauges mounted outside tanks, pipes, bins, hoppers or other types of vessels, use gamma rays to sense the level of liquids, slurries or solids.

Gamma rays penetrate the body and can cause cell death or damage in their path and can affect many of the body's organs. The adverse health effects from exposure to ionizing radiation can vary depending upon the type of cell affected and the extent of damage.

Title 30, C.F.R. § 57.5047 requires that gamma radiation surveys be conducted annually in all underground mines where radioactive ores are mined. The standard also requires, where average gamma radiation measurements are in excess of 2.0 milliroentgens per hour in the working place, that gamma radiation dosimeters be provided for all persons affected, and that records of cumulative individual gamma radiation exposures be kept. The standard further stipulates that annual individual gamma radiation exposure shall not exceed 5 Rems.

There are only two underground mines in the United States where radioactive ores are mined and the ore is of "low grade" quality. Thus, the levels of gamma radiation are also low. Normally, where gamma radiation is present, it is localized (found in a specific area and not mine-wide) and thus only employees working in those localized areas are exposed. Because of this, radiation levels do not reach the 2 milliroentgen per hour limit triggering the requirement that workers be

provided gamma radiation dosimeters which measure the amount of radiation to which an employee is exposed, and that records be kept. There are currently no underground mines in the United States where workers are required to be provided gamma radiation dosimeters.

2. Indicate how, by whom, and for what purpose the information is to be used. Except for a new collection, indicate the actual use the agency has made of the information received from the current collection.

Records of cumulative occupational radiation exposures aid in the protection of workers and in control of subsequent radiation exposure. The records are also used in evaluating the effectiveness of the protection program in demonstrating compliance with regulatory requirements.

3. Describe whether, and to what extent, the collection of information involves the use of automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses, and the basis for the decision for adopting this means of collection. Also describe any consideration of using information technology to reduce burden.

No improved information technology has been identified that would reduce the burden, however in order to comply with the Government Paperwork Elimination Act mine operators may develop and retain the records of gamma radiation exposures in whatever method they chose, which may include utilizing computer technology. Section 101(a)(9) of the Federal Mine Safety and Health Act of 1977 prohibits any reduction in the protection afforded by existing standards.

4. Describe efforts to identify duplication. Show specifically why any similar information already available cannot be used or modified for use for the purposes described in Item 2 above.

Records are unique to each mine. No similar or duplicate information exists that could be used.

5. If the collection of information impacts small businesses or other small entities (Item 5 of OMB Form 83-I), describe any methods used to minimize burden.

The provisions of the Federal Mine Safety and Health Act of 1977 (Mine Act) and MSHA regulations and standards apply to operations of any size because accidents, injuries and illnesses can occur at any mine regardless of size. Congress intended that the law be enforced at all mining operations within its jurisdiction regardless of size and that information collection and record keeping requirements be consistent with efficient and effective enforcement of the Act. S. Rep. 181, 95th Cong., 1st Sess. 28 (1977). However, Congress did recognize that small operations may face problems in complying with some of the provisions of the Mine Act. Section 103(e) of the Mine Act directs the Secretary of Labor not to impose an unreasonable burden on small businesses in obtaining any information under the Act. Accordingly, MSHA takes this into consideration when developing regulatory requirements, and when appropriate and consistent with assuring the health and safety of this nation's miners, different requirements for small and large mines exist. See, for example, 30 CFR §§ 49.3 and 50.11(b). To provide distinct information collection requirements for small mines in the regulation at hand, however, would not promote the Act's objectives. This information collection does not have a significant economic impact on a substantial number of small entities.

6. Describe the consequence to Federal program or policy activities if the collection is not conducted or is conducted less frequently, as well as any technical or legal obstacles to reducing burden.

The standard requires that gamma radiation surveys be conducted annually in all underground mines where radioactive ores are mined. Where average gamma radiation measurements are in excess of 2.0 milliroentgens per hour, gamma radiation dosimeters are provided to all persons affected and records of cumulative individual gamma radiation exposure are required to be kept. MSHA believes that this is the minimum necessary to protect miners from overexposure to hazardous levels of gamma radiation.

7. Explain any special circumstances that would cause an information collection to be conducted in a manner:

- ! requiring respondents to report information to the agency more often than quarterly;
- ! requiring respondents to prepare a written response to a collection of information in fewer than 30 days after receipt of it;
- ! requiring respondents to submit more than an original and two copies of any document;
- ! requiring respondents to retain records, other than health, medical, government contract, grant-in-aid, or tax records for more than three years;
- ! in connection with a statistical survey, that is not designed to produce valid and reliable results that can be generalized to the universe of study;
- ! requiring the use of a statistical data classification that has not been reviewed and approved by OMB;
- ! that includes a pledge of confidentiality that is not supported by authority established in statute or regulation, that is not supported by disclosure and data security policies that are consistent with the pledge, or which unnecessarily impedes sharing of data with other agencies for compatible confidential use; or
- ! requiring respondents to submit proprietary trade secret, or other confidential information unless the agency can demonstrate that it has instituted procedures to protect the information's confidentiality to the extent permitted by law.

This information collection is consistent with the guidelines in 5 CFR § 1320.5. 30 CFR 57.5047(a) requires that gamma radiation surveys be conducted annually in all underground mines where radioactive ores are mined. 30 CFR 57.5047(c) requires that gamma radiation dosimeters be provided for persons exposed to radiation measurements in excess of 2.0 milliroentgens per hour and that records of cumulative individual gamma radiation exposure be kept.

8. If applicable, provide a copy and identify the data and page number of publication in the Federal Register of the agency's notice, required by 5 CFR 1320.8(d), soliciting comments on the information collection prior to submission to OMB. Summarize public comments received in response to that notice and describe actions taken by the agency in response to these comments. Specifically address comments received on cost and hour burden.

Describe efforts to consult with persons outside the agency to obtain their views on the availability of data, frequency of collection, the clarity of instructions and record keeping, disclosure, or reporting format (if any), and on the data elements to be recorded, disclosed, or reported.

Consultation with representatives of those from whom information is to be obtained or those who must compile records should occur at least once every 3 years -- even if the collection of information activity is the same as in prior periods. There may be circumstances that may preclude consultation in a specific situation. These circumstances should be explained.

MSHA will publish the proposed information collection requirements in the Federal Register, notifying the public that these information collection requirements are being reviewed in accordance with the Paperwork Reduction Act of 1995, and giving interested persons 60 days to submit comments.

9. Explain any decision to provide any payment or gift to respondents, other than remuneration of contractors or grantees.

MSHA has made no decision to provide payment or gifts to the respondents.

10. Describe any assurance of confidentiality provided to respondents and the basis for the assurance in statute, regulation, or agency policy.

Records do not require confidentiality.

11. Provide additional justification for any questions of a sensitive nature, such as sexual behavior and attitudes, religious beliefs, and other matters that are commonly considered private. This justification should include the reasons why the agency considers the questions necessary, the specific uses to be made of the information, the explanation to be given to persons from whom the information is requested, and any steps to be taken to obtain their consent.

There are no questions of a sensitive nature.

12. Provide estimates of the hour burden of the collection of information. The statement should:

- !** Indicate the number of respondents, frequency of response, annual hour burden, and an explanation of how the burden was estimated. Unless directed to do so, agencies should not conduct special surveys to obtain information on which to base hour burden estimates. Consultation with a sample (fewer than 10) of potential respondents is desirable. If the hour burden on respondents is expected to vary widely because of differences in activity, size, or complexity, show the range of estimated hour burden, and explain the reasons for the variance. Generally, estimates should not include burden hours for customary and usual business practices.
- !** If this request for approval covers more than one form, provide separate hour burden estimates for each form and aggregate the hour burdens in Item 13 of OMB Form 83-I.
- !** Provide estimates of annualized cost to respondents for the hour burdens for collections of information, identifying and using appropriate wage rate categories. The cost of contracting out or

paying outside parties for information collection activities should not be included here. Instead,

this cost should be included in Item 13.

The annual gamma radiation survey is accomplished by taking instant radiation readings with a Geiger counter at all active work places. Although there is no explicit record keeping requirement pertaining to the annual survey, it is an information collection activity, and the gamma radiation readings are recorded when taken to verify results. There are 2 underground mines where radioactive ores are mined. MSHA estimates that the survey would take a mine supervisor (estimated hourly salary of \$45.79, based on the U.S. Metal and Mineral Industrial Mine Salaries, Wages, and Benefits - 1999 Survey Results) approximately one hour to take and record the measurements. The record of the survey would be retained until the next regular inspection (maximum 3 months). Due to the low grade of radioactive ores mined in the United States, there are no mines where average gamma radiation measurements are in excess of 2.0 milliroentgens per hour in the work place. Therefore, no gamma radiation dosimeters are provided nor are records kept of cumulative individual gamma radiation exposure.

Hour Burden:

$$2 \text{ mines} \times 1 \text{ hour} = 2 \text{ hours}$$

Hour Burden Cost:

$$2 \text{ hours} \times \$45.79 = \$92.00$$

13. Provide an estimate of the total annual cost burden to respondents or record keepers resulting from the collection of information. (Do not include the cost of any hour burden shown in Items 12 and 14.)

- !** The cost estimate should be split into two components: (a) a total capital and start-up cost component (annualized over its expected useful life); and (b) a total operation and maintenance and purchase of services component. The estimates should take into account costs associated with generating, maintaining, and disclosing or providing the information. Include descriptions of methods used to estimate major cost factors including system and technology acquisition, expected useful life of capital equipment, the discount rate(s), and the time period over which costs will be incurred. Capital and start-up costs include, among other items, preparations for collecting information such as purchasing computers and software; monitoring, sampling, drilling and testing equipment; and record storage facilities.
- !** If cost estimates are expected to vary widely, agencies should present ranges of cost burdens and explain the reasons for the variance. The cost of purchasing or contracting out information collection services should be a part of this cost burden estimate. In developing cost burden estimates, agencies may consult with a sample of respondents (fewer than 10), utilize the 60-day pre-OMB submission public comment process and use existing economic or regulatory impact analysis associated with the rulemaking containing the information collection, as appropriate.
- !** Generally, estimates should not include purchases of equipment or services, or portions thereof, made: (1) prior to October 1, 1995, (2) to achieve regulatory compliance with requirements not

associated with the information collection, (3) for reasons other than to provide information or keep records for the government, or (4) as part of customary and usual business or private practices.

There is no annual cost burden to respondents or record keepers resulting from this collection of information.

14. Provide estimates of annualized cost to the Federal government. Also, provide a description of the method used to estimate cost, which should include quantification of hours, operational expenses (such as equipment, overhead, printing, and support staff), and any other expense that would not have been incurred without this collection of information. Agencies also may aggregate cost estimates from Items 12, 13, and 14 in a single table.

No Federal inspection costs have been associated specifically with this information collection. The examination of these records is just one aspect of the annual inspection. Complete inspections are required under Section 103(a) of the Mine Act and are required 4 times a year for underground mines and twice a year for surface operations.

15. Explain the reasons for any program changes or adjustments reporting in Items 13 or 14 of the OMB Form 83-I.

There is no change in burden hours for this collection, however, the increase in burden hour costs is due to increase in salary during the past three years..

16. For collections of information whose results will be published, outline plans for tabulation, and publication. Address any complex analytical techniques that will be used. Provide the time schedule for the entire project, including beginning and ending dates of the collection of information, completion of report, publication dates, and other actions.

The results from the information gathered from this collection will not be published.

17. If seeking approval to not display the expiration date for OMB approval of the information collection, explain the reasons that display would be inappropriate.

MSHA is not seeking approval to either display or not display the expiration date for OMB approval of this information collection.

